Buildings Criteria - Low carbon New Buildings

Guidance to Scope 3 Accounting and Reporting

Final for Issue

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1 Guide to Scope 3 Accounting and Reporting

1.1 Background

1.1.1 What is GHG accounting?

Greenhouse Gas (GHG) accounting is a process of quantifying and reporting GHG emissions and removals associated with human activities. GHG accounting is important because it helps individuals, organisations and governments understand and track their carbon footprint and identifies area where emissions can be reduced. They are also important for ensuring compliance with regulatory requirements and meeting sustainability goals.

The application of GHG accounting is numerous and diverse. It can be used by companies to measure and manage their carbon emissions, identify energy saving opportunities and improve their environmental performance.

It is an essential tool for addressing climate change and achieving a sustainable future. By accurately measuring and reporting GHG emissions, individuals, organizations, and government can work together to reduce emissions and transition to a low carbon economy.

1.1.2 GHG Accounting in the real estate sector

One of the key applications of GHG accounting in the real estate sector is to inform sustainability strategies and set targets for reducing emissions. This includes assessing the energy efficiency of buildings, reducing energy consumption, and promoting the use of renewable energy sources. It can also help real estate companies to identify areas where emissions can be reduced through changes in transportation, waste management (human behaviour) and supply chain practices.

It is increasingly being used to access the environmental performances of real estate investments and to inform investment decisions. This includes evaluating the carbon footprint of buildings and portfolios as well as assessing the potential for carbon pricing and regulatory risks. It is crucial for the real estate sector to manage its environmental impact and meet the sustainability goals, as well as respond to changing the market demands and regulatory requirements.

1.1.3 Corporate GHG protocol standard

Until recently, companies have focused on emission from their own operations predominantly known as Scope 1 and Scope 2. With the growth in the market, there is an increasing understanding in the importance of accounting of GHG emissions along their value chains and products (known as Scope 3) to manage the GHG-related risks and opportunities.

The GHG Protocol Corporate Value chain (scope 3) Accounting and reporting standard[1] is an internationally recognised method for companies to account for their Scope 3 emissions.

The Corporate Standard classifies a company's direct and indirect emissions into three 'scopes' and requires that companies account for and report on scope 1 emissions (i.e., direct emissions from owned or controlled sources), and all scope 2 (i.e., all indirect emissions from the generation of purchased energy consumed by the reporting company and there is a flexibility in accounting for Scope 3 emissions (i.e., all other indirect emissions that occur in a company's value chain. An overview of the three GHG protocol scopes and categories of scope 3 emissions is provided below.

Figure 1: Overview of GHG protocol scopes and emissions across the value chain

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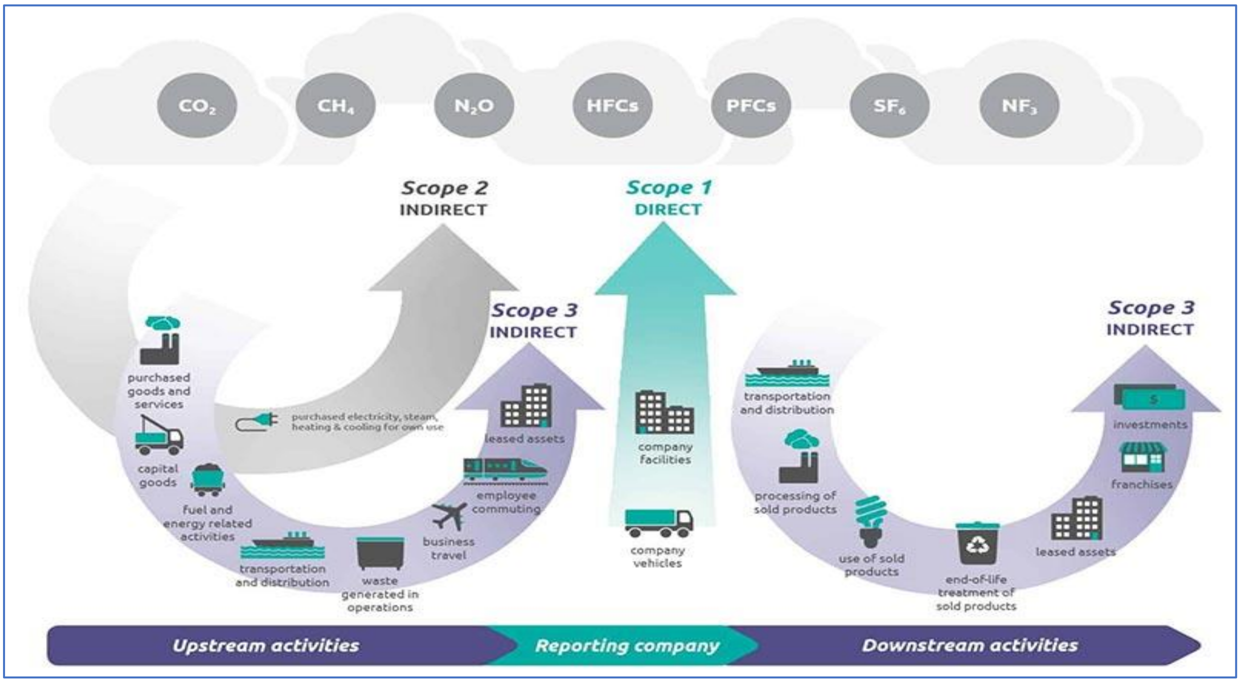
[1] Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf (ghgprotocol.org)



Source: Scope3_Calculation_Guidance_0.pdf (ghgprotocol.org)

This guidance aims to assist companies under the Climate Bonds Low-carbon Buildings Sector to report on Scope 3 emissions and is intended to meet the suggested sector-specific guidance requirements, as set out in the GHG Protocol Corporate Value Chain (Scope 3) accounting and Reporting Standard to promote additional consistency in way of companies accounting and reporting on scope 3 emissions.

This should be used in conjunction with the more detailed Technical Guidance for Calculating Scope 3 emissions document[2] while undertaking the calculations along with the GHG protocol.

1.1.4 Overview of Scope 3 categories

The GHG Protocol Corporate Value chain Standard categorizes scope 3 emissions into 15 categories, as listed in figure 1 above and figure 2 along with the description of each of the 15 categories is presented in table 3. The categories are intended to provide companies with a systematic framework to organize, understand and report on the diversity of scope 3 activities within a corporate value chain.

Table 1: Scope 3 Categories (adapted from GHG Protocol)

Upstream or downstream	Scope 3 category
Upstream scope 3 emissions	1 Purchased goods and services 2 Capital goods 3 Fuel- and energy-related activities (not included in Scope 1 and scope 2) 4 Waste generated in operations 5 Business travel 6 Employee commuting 7 Upstream leased assets
Downstream scope 3 emissions	8 Downstream transportation and distribution 9 Processing of sold products

[2] Scope3_Calculation_Guidance_0.pdf (ghgprotocol.org)

Upstream or downstream	Scope 3 category
	10 Use of sold products 11 End-of-life treatment of sold products 12 Downstream leased assets 13 Franchises 14 investments

Source: Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf (ghgprotocol.org)

Table 2: Description and minimum boundaries

Category	Category description	Minimum boundary
1 Purchased goods and services	• Extraction, production, and transportation of goods and services purchased or acquired by the reporting company in the reporting year, not otherwise included in categories 2 - 8	• All upstream (cradle-to-gate) emissions of purchased goods and services
2 Capital Goods	Extraction, production, and transportation of capital goods purchased or acquired by the reporting company in the reporting year.	All upstream (cradle-to-gate) emissions of purchased capital goods
3 Fuel and energy related activities (not included in scope 1 and 2 emissions)	None	n/a
4 Upstream transportation and distribution	None	n/a
5 Waste generated in operations	None	n/a
6 Business travel	None	n/a
7 Employee commuting	None	n/a
8 Upstream leased assets	None	n/a
9 Downstream transportation and distribution	None	n/a
10 Processing of sold products	Processing of intermediate products sold in the reporting year by downstream companies (e.g., manufacturers)	The scope 1 and scope 2 emissions of downstream companies that occur during processing (e.g., from energy use)
11 Use of sold products	End use of goods and services sold by the reporting company in the reporting year	The direct use-phase emissions of sold products over their expected lifetime (i.e., the scope 1 and scope 2 emissions of end users that occur from the use of: products that directly consume energy (fuels or electricity) during use; fuels and feedstocks; and GHGs and products that contain or form GHGs that are emitted during use)

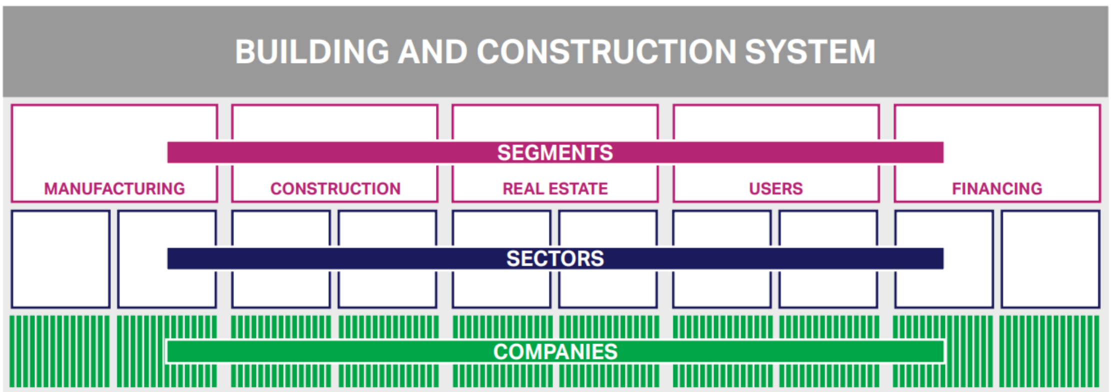
Category	Category description	Minimum boundary
		• **Optional**: The indirect use-phase emissions of sold products over their expected lifetime (i.e., emissions from the use of products that indirectly consume energy (fuels or electricity) during use)
12 End-of-life treatment of sold products	Waste disposal and treatment of products sold by the reporting company (in the reporting year) at the end of their life	The scope 1 and scope 2 emissions of waste management companies that occur during disposal or treatment of sold products
13 Downstream leased assets	Operation of assets owned by the reporting company (lessor) and leased to other entities in the reporting year, not included in scope 1 and scope 2 - reported by lessor	The scope 1 and scope 2 emissions of lessees that occur during operation of leased assets (e.g., from energy use). • **Optional**: The life cycle emissions associated with manufacturing or constructing leased assets
14 Franchises	None	n/a
15 Investments	Operation of investments (including equity and debt investments and project finance) in the reporting year, not included in scope 1 or scope 2	

Source: Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf (ghgprotocol.org)

1.2 Defining the categories of the building and construction system

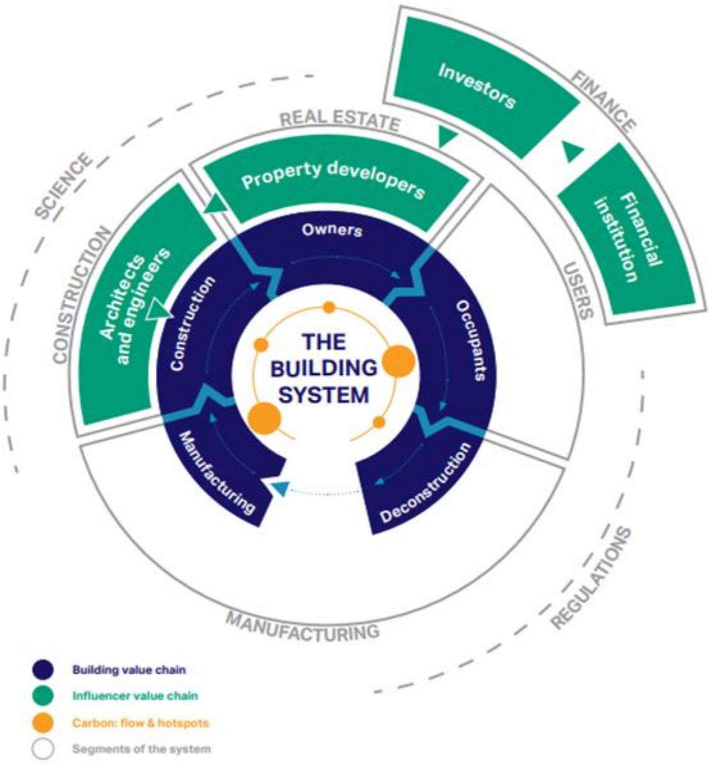
Defining the categories of the building is a key part for reporting and accounting of Scope 3 emissions. This determines who are the key players included in a company's organizational boundary and how emission from each operation is integrated by the reporting company and has been adopted from world business council for sustainable development. Figure 3 explains the categories of the building and construction system while figure 4 shows the value chain inside the building and construction system.

Figure 2. Categories of the building and construction system



Source: The Building System Carbon Framework (wbcsd.org)

Figure 3. Value chain of building and construction system



Source: [The Building System Carbon Framework (wbcsd.org)]

1.3 Guidance for reporting and accounting under the Climate Bonds Low carbon Buildings Criteria

1.3.1 Building value chain and their intended users

The below table provides the list of building value chain identified from WBCSD and their intended users who are required to report for Scope 3 emissions under the CBI Low carbon buildings criteria.

Table 3: Alignment of intended users within the Building value chain

Building value chain	Intended users
Manufacturers	Users who are linked with the manufactures (as their products are an essential part of a buildings value chain representing a large portion of embodied carbon).
Construction	• Architecture/engineering firms • Property Developers
Owners/Managers	• Developers • Property/Asset managers • Owner - lessor • Owner - occupier • Financial Institutions (FI) (?) • (Real estate?)
Deconstruction	• Construction firms • Developers

Building value chain	Intended users
	• Individual house owners (?)

1.3.2 Intended users and their relevant target categories

The below table provides the list of intended users and their relevant target categories adapted from GHG Protocol Corporate Value chain accounting and reporting standard and Table 4 provides the relation between Life cycle stages (for Whole Life Carbon Assessment) and the corresponding reporting category under the GHG Protocol.

Table 4: Scope categories and target categories

Intended users	Cat 1	Cat 2	Cat 3 to Cat 9	Cat 10	Cat 11	Cat 12	Cat 13	Cat 14	Cat 15
Architecture/engineering firms				✓	✓	✓			
Property Developers	✓	✓				✓			
Property/Asset managers	✓		n/a						
Owner - lessor	✓	✓					✓		
Owner - Occupier	✓	✓					✓		

Table 5: Relation between Life Cycle Stages and GHG Protocol Categories

Life Cycle Stages	Reporting Category
A1 - A5 Includes the Embodied Emissions of a built environment project	• Reported as Scope 3 under Category 1, 2 and/or 4, as applicable. • In the year the project occurred.
B1, B2, B3, B6 - Operational emissions associated with a built environment project B4 and B5 are embodied emissions reported as Scope 3 in the year of replacement or refurbishment	• Category 1, cat 10, cat 13 (in-use embodied emissions for renovation or maintenance)
C1 - C4 Embodied emissions of a build environment project (Reported as Scope 3)	• Category 5 or 12 in the year the materials reach end of life
D emissions are not embodied emissions but can be considered relevant carbon sinks if additional accounting criteria is met.	• n/a